

CLAIMS

1. A constant flow valve, comprising a body unit formed by a inlet channel and outlet channel for fluid and a chamber communicating with the inlet channel and outlet channel, and a valve member provided in said  
5 chamber and having a valve body and a first diaphragm, wherein said constant flow valve further comprises a second diaphragm and third diaphragm positioned at the two sides of said valve member in said  
10 chamber and having effective pressure receiving areas smaller than the first diaphragm, said valve member and said diaphragms being mounted in said chamber by the diaphragms being fixed to said body unit at the circumferences thereof, said chamber being divided into a  
15 first pressure chamber formed between one end of said chamber and said second diaphragm, a second pressure chamber formed between the other end of said chamber and said third diaphragm, a first valve chamber formed between said first diaphragm and said third diaphragm,  
20 and a second valve chamber formed between said first diaphragm and said second diaphragm, said first pressure chamber having means for applying a constant inward force to said second diaphragm at all times, said first valve chamber communicating with said inlet channel, said  
25 second valve chamber having a valve seat cooperating with said valve body of said valve member, said second valve chamber being divided into a bottom second valve chamber positioned at the first diaphragm side with respect to said valve seat and communicating with said first valve chamber through a communication hole formed in said first  
30 diaphragm and a top second valve chamber positioned at said second diaphragm side and communicating with said outlet channel, the space between said valve body and said valve seat forming a fluid control part using  
35 displacement of said valve member with respect to said valve seat to change the opening area between said valve body and said valve seat to control the fluid pressure of

said bottom second valve chamber, said second pressure chamber having means for applying a constant inward force to said third diaphragm at all times.

5        2.    The constant flow valve according to claim 1, wherein the means for applying a constant inward force is a spring device or pressurized fluid.

10       3.    The constant flow valve according to claim 1, wherein a fourth diaphragm is provided in said first pressure chamber and constant force is applied through said fourth diaphragm to said second diaphragm.

      4.    The constant flow valve according to claim 2, wherein a fourth diaphragm is provided in said first pressure chamber and constant force is applied through said fourth diaphragm to said second diaphragm.